



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,768	04/04/2001	Minoru Kuniyoshi	205446US0	1447

22850 7590 10/29/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202

EXAMINER

BOS, STEVEN J

ART UNIT	PAPER NUMBER
----------	--------------

1754

DATE MAILED: 10/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/824,768

Applicant(s)

Kuniyoshi et al

Examiner

Steven Bos

Art Unit

1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Sep 17, 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12, 15-30, and 32-34 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 15-30, and 32-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 1754

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7-12,15-30,33 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 7,10, "that does not contain oxygen" is new matter that does not have written description in the instant specification, Ex parte Grasselli, 231 USPQ 393,395. Applicant points to the instant examples for implicit support that the reducing gas does not contain oxygen because the examples only recite the use of nitrogen and 40 vol.% hydrogen. However the examples also show that the reducing gas does not contain carbon monoxide, sulfur dioxide, hydrogen sulfide and methane. This is not commensurate with the instant claims which recite that the reducing gas can contain these components. If applicant wants to exclude oxygen then "consisting of" language would need to be recited.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1754

In claim 9, "for a period necessary to sufficiently<sup>1</sup> reduce the manganese ore with a reducing gas" is indefinite as to how much is considered to be "sufficient".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9,15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welsh '097.

Welsh teaches the instantly claimed process of treating a manganese ore with a reducing gas of methane at the instantly claimed temperature which would produce the instantly claimed treated manganese ore having the instantly claimed product characteristics since the taught process is the same as that instantly claimed. See claim 1 and col. 13.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Boesch*, 205 USPQ 215.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range

Art Unit: 1754

disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, *In re Brown*, 173 USPQ 685, *In re Fessmann*, 180 USPQ 324, *In re Spada*, 15 USPQ2d 1655, *In re Fitzgerald*, 205 USPQ 594, and MPEP 2113.

Where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, see *In re Best*, 195 USPQ 430.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over El Tawil '216 or Kane '827 or Barner '094.

El Tawil '216 or Kane '827 or Barner '094 each teach or at least suggest the instantly claimed process of claim 4 which would form the instantly claimed product since the taught processes are the same as that instantly claimed for making the product. See cols. 2,4 and the claims of El Tawil; cols. 4,11 of Kane; cols. 4,5,17,18 of Barner.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within

Art Unit: 1754

the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Boesch*, 205 USPQ 215.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Claims 1-12, 15-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barner '094.

Barner '094 teaches or at least suggests the instantly claimed process which would form the instantly claimed product since the taught process is the same as that instantly claimed for making the product. See cols. 4, 5, 6, 17, 18 of Barner.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results, see *In re Boesch*, 205 USPQ 215.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, *In re Malagari*, 182 USPQ 549.

Art Unit: 1754

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehara '902 or Andersen '198 or Andersen '198 or Riggs, Jr. '320.

Each of the references teaches the instantly claimed electrolytic manganese dioxide. See the abstract of each.

Any difference imparted by the product by process limitations would have been obvious to one having ordinary skill in the art at the time the invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct not the examiner to show the same process of making, In re Brown, 173 USPQ 685, In re Fessmann, 180 USPQ 324, In re Spada, 15 USPQ2d 1655, In re Fitzgerald, 205 USPQ 594, and MPEP 2113.

Where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicant to establish that their product is patentably distinct, see In re Best, 195 USPQ 430.

Claims 32,33 are rejected under 35 U.S.C. 103(a) as being unpatentable over El Tawil '216 or Kane '827 or Barner '094 or Welsh '097 as applied to the claims above, and further in view of Bowerman '043 even further in view of Takehara '902 or Riggs, Jr. '320 or Andersen '484 or Andersen '198.

The primary references teach or suggest the instantly claimed process as explained above but may differ in that dissolving the reduced manganese ore in sulfuric acid and further electrolytic

Art Unit: 1754

oxidation treatment of the dissolved ore to form electrolytic manganese dioxide may not be stated.

Bowerman teaches dissolving reduced manganese ore in sulfuric acid. See cols. 2-4. Each of Takehara '902 or Riggs, Jr. '320 or Andersen '484 or Andersen '198 teaches or at least suggests the instantly process of subjecting a manganese sulfate solution to electrolytic oxidation to form electrolytic manganese dioxide. See the abstract of each.

It would have been obvious to one skilled in the art to use the reduced manganese ore from each of the primary references as the feed in Bowerman to form manganese sulfate solution because Bowerman requires the reduced manganese ore that is formed by each of the primary references. Furthermore, it would have been obvious to one skilled in the art to use the manganese sulfate solution formed in Bowerman as the electrolytic oxidizing solution in the process of each of Takehara or Riggs, Jr. or Andersen '484 or Andersen '198 because these references require the manganese sulfate solution that is formed in Bowerman. In re Kamlet, 88 USPQ 106.

Applicant's arguments filed September 17, 2002 have been fully considered but they are not persuasive.

Applicant states that Welsh does not teach or suggest a treated manganese ore having the minimum 98% dissolvability in sulfuric acid.



Art Unit: 1754

However instant claim 4 recites that the instant treated manganese ore is obtained by contacting manganese ore with a reducing gas at 400-790°C which is taught by Welsh. Therefore Welsh must also obtain the instantly claimed treated manganese ore.

Applicant states that Welsh teaches the reducing gas to be primarily synthesis gas but it must also contain some significant amount of oxygen whereas the instant process is performed without oxygen.

However Welsh in col. 3 shows that the synthesis gas does not contain any oxygen since the components of the producer or synthesis gas add up to 100% and do not include oxygen. Cols. 3-4 of Welsh also suggest the instantly claimed amount of reducing gas to be used to reduce the manganese ore.

Applicant states that El Tawil does not teach a treated manganese ore which has the instantly claimed manganese dissolution of 98% in sulfuric acid.

However El Tawil does teach the instantly claimed contacting of manganese ore with a reducing gas at or within the instantly claimed temperatures as is recited in instant claim 4 for obtaining the instantly claimed treated manganese ore.

Because Kane suggests contacting manganese ore with sulfur dioxide gas at a temperature of 500°C which meets the process of making the treated manganese ore claimed in instant claim 4 the instantly claimed treated manganese ore would also be obtained by the taught process.

Because Barner suggests contacting manganese ore with synthesis gas at a temperature of 1350°F which equals 732°C (see col. 6) which meets the process of making the treated

Art Unit: 1754

manganese ore claimed in instant claim 4 the instantly claimed treated manganese ore would also be obtained by the taught process.

The instant claims do not exclude the taught extra step of eliminating oxygen from manganese ore prior to reducing the manganese ore in Barner. Also, the taught aqueous ammonia-ammonium carbonate extraction meets the instantly claimed water immersion because the term aqueous means water.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

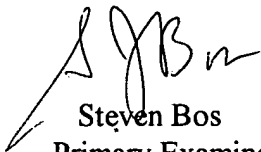
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is (703) 308-2537. The examiner is on

Art Unit: 1754

the increased flexitime program schedule. The FAX No. for After Final amendments is 703-872-9311; for all others it is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Steven Bos  
Primary Examiner  
Art Unit 1754